

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Official Action dated 3 May 2006. Responsive to the rejections made in the Official Action, Claims 1, 4 and 13 have been amended to clarify the combination of elements which form the Invention of the subject Patent Application. Additionally, Claims 19-20 were canceled by a previous amendment and Claims 21 and 22 have been added.

In the Official Action, the Examiner rejected Claims 1 and 13 under 35 U.S.C. § 112 for failing to particularly point out and distinctly claim the subject matter Applicant regards as his invention. Accordingly, claims 1 and 13 have been amended to delete the confusing language recited in the claims.

Additionally, the Examiner rejected Claims 1-6, 13-15, and 17-18 under 35 U.S.C. § 103(a), as being unpatentable over Mills et al (U.S. Patent 5,317,269), in view of Lo et al (U.S. Patent 5,738,104).

Before discussing the prior art relied upon by the Examiner, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. Electrocardiograms are usually abbreviated using either “ECG” or “EKG.” Thus as both terms are interchangeable, the following remarks will utilize “ECG” when referencing the abbreviated version of electrocardiogram.

The invention of the subject Patent Application is directed to a device for measuring an electrocardiogram with tapeless format. The device includes a shell having opposing top and bottom surfaces. The shell is shaped as a thin and long cube and has at least one operating panel on the top surface. The device includes at least two gelless electrodes with a thin foil shape slightly embedded and fixed in the operating panel as well as two gelless electrodes extending from the upper surface through at least one edge of the shell to the bottom surface of the shell that is opposite to the operating panel. The device further includes at least one information display located on the operating panel to display a plurality of measured values. The device includes a calculation system disposed in the shell and connected to the two gelless electrodes and the information display for calculating relative electrical information measured from the gelless electrodes and display results on the information display.

From another aspect, as defined in Claim 13, the invention of the subject patent Application is directed to a device for measuring an electrocardiogram with tapeless format that includes a shell having opposing top and bottom surfaces. The shell is shaped as a thin and long cube and has at least one operating panel on the top surface and at least two gelless electrodes which are slightly embedded and fixed in the same surface on the operating panel. At least one information display located on the operating panel to display measured values is included in the device. Still further, the device includes a calculation system disposed in the shell

and connected to the two gelless electrodes and the information display for calculating relative electrical information measured from the gelless electrodes and display results on the information display. By that arrangement, the user is able to support the device in the hands of the user, utilizing various finger arrangements, where at least one finger of each hand is in contact with the gelless electrodes to provide a bipolar connection to the device (see Figs A1-A3 in the Appendix of this Amendment). Alternatively, the user has the option of placing the device on a surface and utilizing various finger arrangements to contact with the gelless electrodes (see Fig. A4 of the Appendix). Thus, the present invention is a portable, independent measurement device rather than an auxiliary device being combined with other conventional products.

In contradistinction, the Mills et al reference is directed to a wrist-worn ECG monitor. The watch-like device has an upper electrode and a bottom electrode. When the user wears the watch, the bottom electrode directly touches the wrist of one hand. Further, if the user would like to measure his or her ECG value, the user places the opposite hand on the upper electrode of the upper face of the watch. Thus, Mill's two electrodes are disposed on the upper and the bottom face of the watch respectively. Whereas, the present invention teaches that two electrodes can be disposed on either the same upper face or bottom face of the watch. Therefore, nowhere does the reference disclose or suggest two gelless electrodes extending from the upper surface through at least one edge of the shell

to the bottom surface of the shell opposite to the operating panel, as now defined in Claim 1. Further, nowhere does the reference disclose or suggest a structure wherein there are at least two gelless electrodes slightly embedded and fixed in the same surface on the operating panel as now defined in Claim 13

The Lo reference does not overcome the deficiencies of Mills et al. For instance, the Lo reference is directed to an ECG heart rate monitor. The heart rate monitor utilizes 3 electrical contacts (analogous to the gelless electrodes of the present invention) to pick up ECG signals and a differential amplifier to cancel common mode signals.

The Examiner equated the ECG monitor shown in Fig. 3 of the Lo patent to that of the present invention. Yet, Fig. 3. shows an ECG monitor combined with the handlebar of an outdoor/exercise bike. The handlebar further has two grips that are grasped by a user's hand. However, each grip has two electrical contacts, which extend circumferentially around a long handle bar, (see col. 8 lines 3-18). Thus, the user grips the handles to measure his heart rate value. Since the electrical contacts are disposed on the two grips of the bike's handle bar, the user must hold the two grips with the entire palm touching the electrical contacts. Conversely, it is solely the user's fingers that touch the gelless electrodes of the present invention.

Moreover, Lo's Fig. 2 discloses that the electrical contacts are disposed on the front face of the control panel, each electrical contact being flat. Thus, the

electrical contacts neither possess an arced shape nor are they disposed on both front and bottom surfaces as taught in Figs. 2, 3, 6, and 7 of the present invention in the Specification as filed.

Therefore, as neither Mills et al nor Lo et al disclose or suggest the combination of elements which form the invention of the subject Patent Application, and in fact each of the two references teach away from the structure of the invention of the subject Patent Application, their combination cannot make obvious the invention of the subject Patent Application, as now claimed.

Thus, neither Mills nor Lo allude to, describe, or show among other things: “...two gelless electrodes extending from the upper surface through at least one edge of the shell to the bottom surface of the shell opposite to the operating panel,” as is recited in newly amended Independent claim 1.

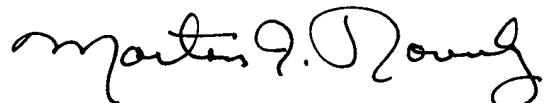
Additionally, neither Mills nor Lo allude to, describe, or show among other things: “...at least two gelless electrodes slightly embedded and fixed in the same surface on the operating panel,” as recited in newly amended independent Claim 13.

The remaining claims are all dependent ultimately on Independent Claims 1 and 13 and are believed to show patentability over the prior art for at least the same reasons as that given for now amended Independent Claims 1 and 13.

In view of the foregoing amendments and remarks, Applicant believes that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

If there are any further charges incurred by this Amendment, The Director of Patent and Trademarks is hereby authorized to charge Deposit Account #18-2011 to cover the charges.

Respectfully submitted,
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